EMC TEST REPORT
For

SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Digital Video Camera

Model No.: DV095S
FCC ID: XJNDV095S

Prepared for	:	SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.
Address	:	NO.1 Shuoying Rd., Hebei Industry Area, Dalang, Longhua Town, Baoan, Shenzhen, China
Prepared by	:	Shenzhen EMTEK Co., Ltd
Address	:	Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China
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Report Number	:	ES110623132F
Date of Test	:	June 24, 2011 to June 28, 2011
Date of Report	:	June 29, 2011

TABLE OF CONTENT

TEST REPORT DESCRIPTION

Applicant	:	SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.
Manufacturer	:	SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.
EUT	:	Digital Video Camera
Model No.	:	DV095S
FCC ID	:	XJNDV095S
Power Supply	:	DC 4.5V from battery

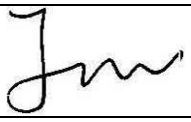
Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B 2009 & FCC / ANSI C63.4-2009

The device described above is tested by SHENZHEN EMTEK CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and SHENZHEN EMTEK CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of SHENZHEN EMTEK CO., LTD.

Date of Test : June 24, 2011 to June 28, 2011

Prepared by : 

(Engineer)

Reviewer : 

(Quality Manager)

Approved & Authorized Signer : 

(Manager)

1. SUMMARY OF TEST RESULT

Emission		
Description of test item	Standard & Limits	Results
Conducted disturbance at mains terminals	FCC Part15, Subpart B, Class B ANSI C63.4: 2009	Pass
Radiated Disturbance	FCC Part15, Subpart B, Class B ANSI C63.4: 2009	Pass
Note: N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	Digital Video Camera
Model Number	:	DV095S
Applicant	:	SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.
Address	:	NO.1 Shuoying Rd., Hebei Industry Area, Dalang, Longhua Town, Baoan, Shenzhen, China.
Manufacturer	:	SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.
Address	:	NO.1 Shuoying Rd., Hebei Industry Area, Dalang, Longhua Town, Baoan, Shenzhen, China.
Date of receiver	:	June 24, 2011
Date of Test	:	June 24, 2011 to June 28, 2011

2.2. Description of Support Device

PC	:	Manufacturer: LENOVO M/N: 9702 S/N: L3C4410 CE, FCC: DOC
LCD Monitor	:	Manufacturer: LENOVO M/N: 9227-AE6 S/N:4M0293084302824 CE, FCC: DOC
Keyboard	:	Manufacturer: LENOVO M/N: KU-0225 S/N:0585494 CE, FCC: DOC
Mouse	:	Manufacturer: LENOVO M/N: MO28UOL S/N:44G7862 068 CE, FCC: DOC

2.3. Description of Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2010.10.28
The certificate is valid until 2013.10.29
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006(identical to ISO/IEC17025:2005)
The Certificate Registration Number is L2291.

Accredited by TUV Rheinland Shenzhen 2010.5.25
The Laboratory has been assessed according to the requirements ISO/IEC 17025.

Accredited by FCC, October 28, 2010
The Certificate Registration Number is 406365.

Accredited by Industry Canada, March 05, 2010
The Certificate Registration Number is 46405-4480.

Name of Firm : SHENZHEN EMTEK CO., LTD

Site Location : Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

2.4. Measurement Uncertainty

Conducted Emission Uncertainty : 2.8dB

Radiated Emission Uncertainty : 3.3dB (3m chamber)

3. MEASURING DEVICE AND TEST EQUIPMENT

3.1.For Power Line Conducted Emission

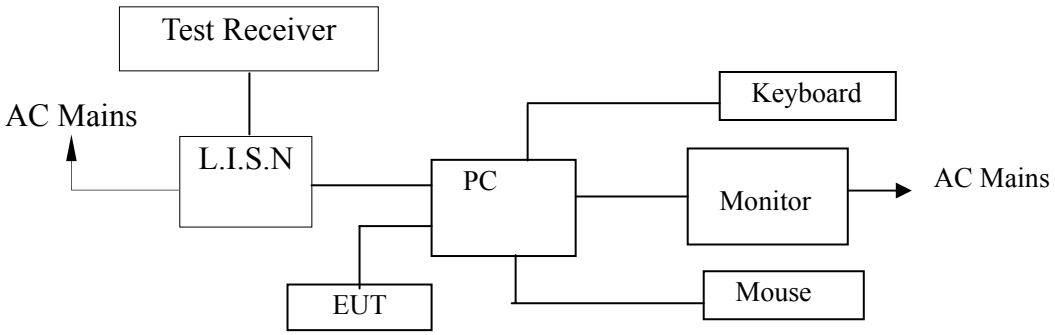
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	828985/018	May 29, 2011	1 Year
2.	L.I.S.N	Rohde & Schwarz	ESH2-Z5	834549/005	May 29, 2011	1 Year
3.	50ΩCoaxial Switch	Anritsu	MP59B	M20531	N/A	N/A
4.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	May 29, 2011	1 Year
5.	Voltage Probe	Rohde & Schwarz	TK9416	N/A	May 29, 2011	1 Year

3.2.For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	101045	May 29, 2011	1 Year
2.	Pre-Amplifier	CDIL	PAP-0203	22013	May 29, 2011	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	143	May 29, 2011	1 Year
4.	Cable	H+B	CBL3-MN-0.5m	100319-2140 500-1	May 29, 2011	1 Year
5.	Cable	H+B	CBL3-NN-3 m	100319-2143 000-1	May 29, 2011	1 Year
6	Cable	H+B	CBL3-MN-6.5m	100319-2146 500-1	May 29, 2011	1 Year
7.	Cable	H+B	CBL3-NN-10 .5m	100319-2141 0500	May 29, 2011	1 Year
8.	Cable	H+B	CBL3-NN-12 .5m	100319-2141 2500	May 29, 2011	1 Year

4. POWER LINE CONDUCTED EMISSION MEASUREMENT

4.1.Block Diagram of Test Setup



(EUT: Digital Video Camera)

4.2.Measuring Standard

FCC Part15, Subpart B, Class B ANSI C63.4: 2009

Power Line Conducted Emission Limits (Class B)

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50 ~ 5.00	56.0	46.0
5.00 ~ 30.00	60.0	50.0
NOTE1-The lower limit shall apply at the transition frequencies. NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.		

4.3.EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet FCC requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT	:	Digital Video Camera
Model Number	:	DV095S
Serial Number	:	N/A

4.4.Operating Condition of EUT

4.4.1.Setup the EUT as shown on Section 4.1.

4.4.2.Turn on the power of all equipments.

4.4.3.Let the EUT work in measuring mode (Connect to PC) and measure it.

4.5. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and connected to the PC, and then PC's power connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the FCC regulations during conducted emission measurement.
The bandwidth of the field strength meter (R&S Test Receiver ESCS30) is set at 9KHz in 150KHz~30MHz and 200Hz in 9KHz~150KHz.
The frequency range from 150kHz to 30MHz is investigated
All the scanning waveform is put in Appendix I.

4.6. Measuring Results

PASS.

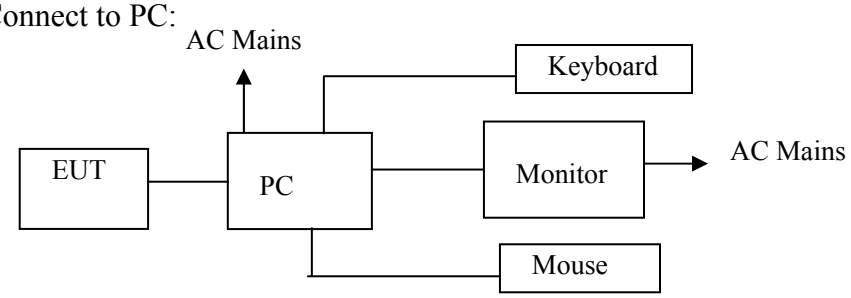
Please refer to Appendix I.

5. RADIATED EMISSION MEASUREMENT

5.1.Block Diagram of Test

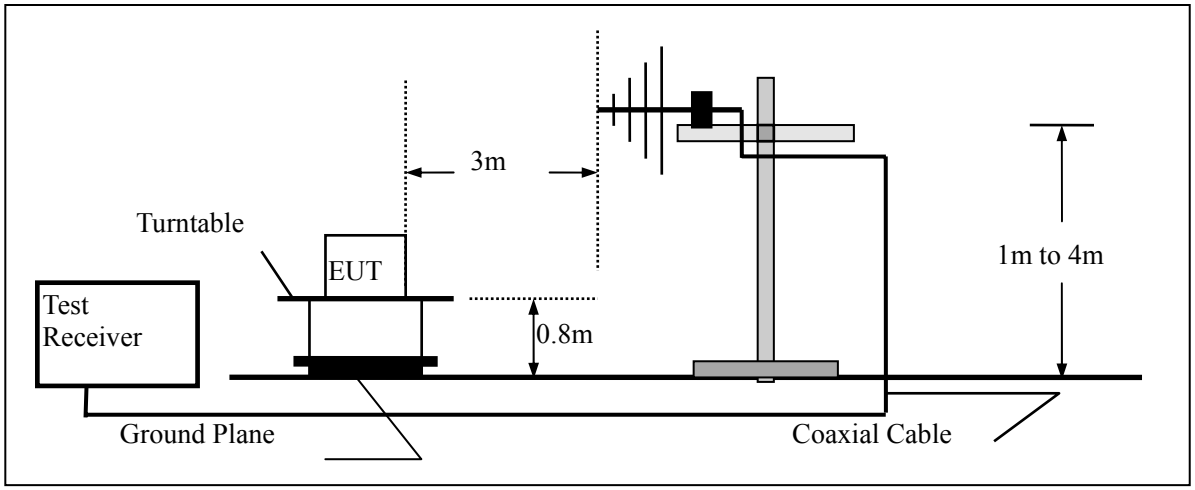
5.1.1. Block diagram of connection between the EUT and simulators.

For Connect to PC:



(EUT: Digital Video Camera)

5.1.2.Block diagram of test setup (In chamber)



(EUT: Digital Video Camera)

5.2.Measuring Standard

FCC Part15, Subpart B, Class B ANSI C63.4: 2009

5.3.Radiated Emission Limits (class B)

Below 1GHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT
		dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Above 1GHz

Frequency (GHz)	Distance (Meters)	Field Strengths Limit	
		Average (dBμV/m)	Peak (dBμV/m)
1~6	3	53.9	73.9

Remark：

(1) The smaller limit shall apply at the cross point between two frequency bands.

(2) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

5.4.EUT Configuration on Test

The FCC Class B regulations test method must be used to find the maximum emission during radiated emission measurement.

5.5.Operating Condition of EUT

5.5.1.Turn on the power.

5.5.2.After that, let the EUT work in test mode (Connect to PC, Recording, Playing) and measure it.

5.6.Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) and horn antenna are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the Receiver is set at 120kHz.
The scanning curves are attached in Appendix II.

5.7.Measuring Results

PASS.

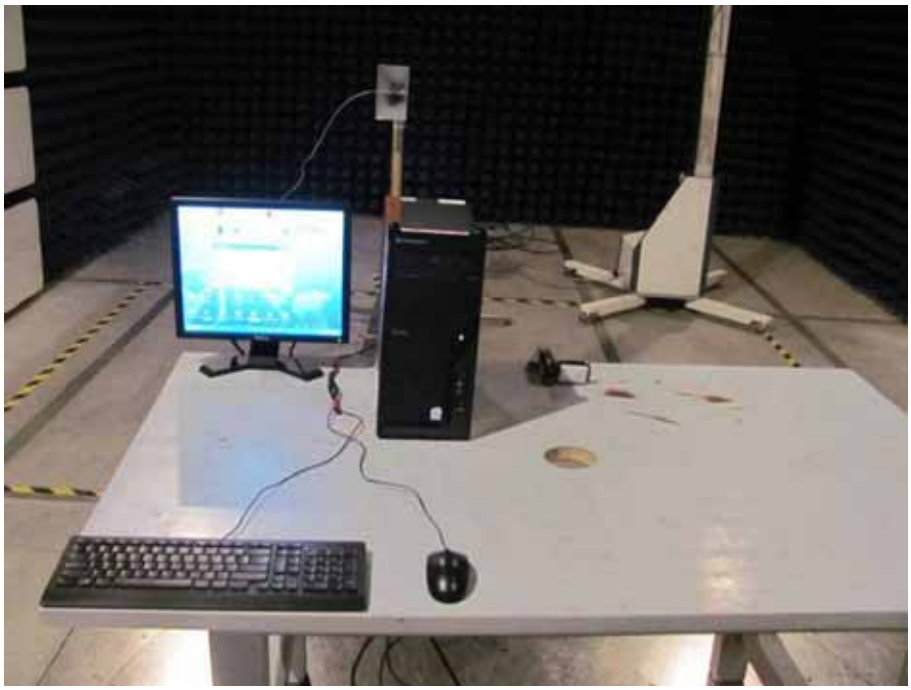
The frequency range from 30MHz to 6000MHz is investigated.

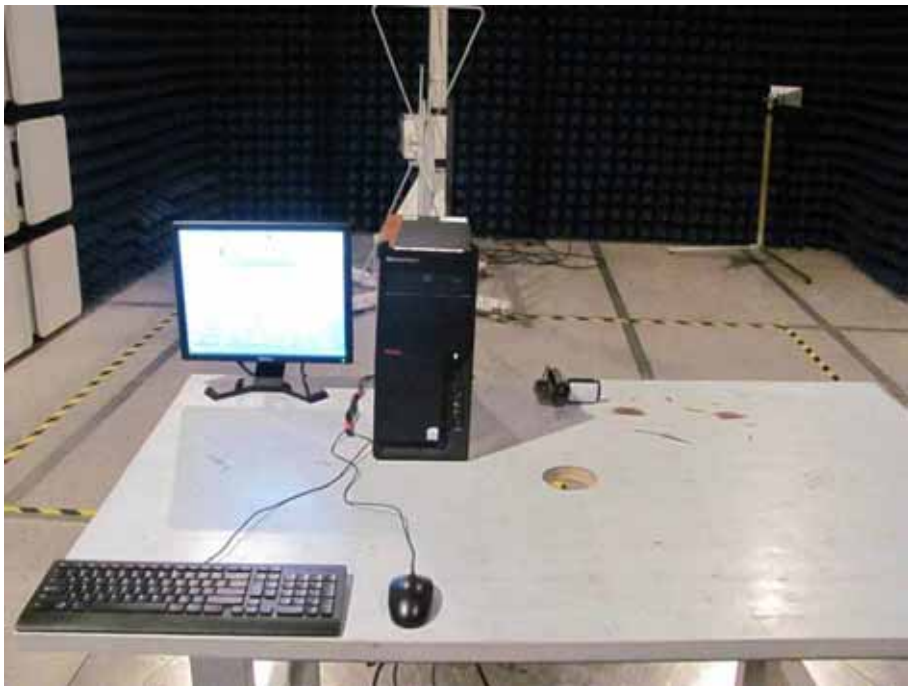
Please refer to Appendix II.

6. PHOTOGRAPH

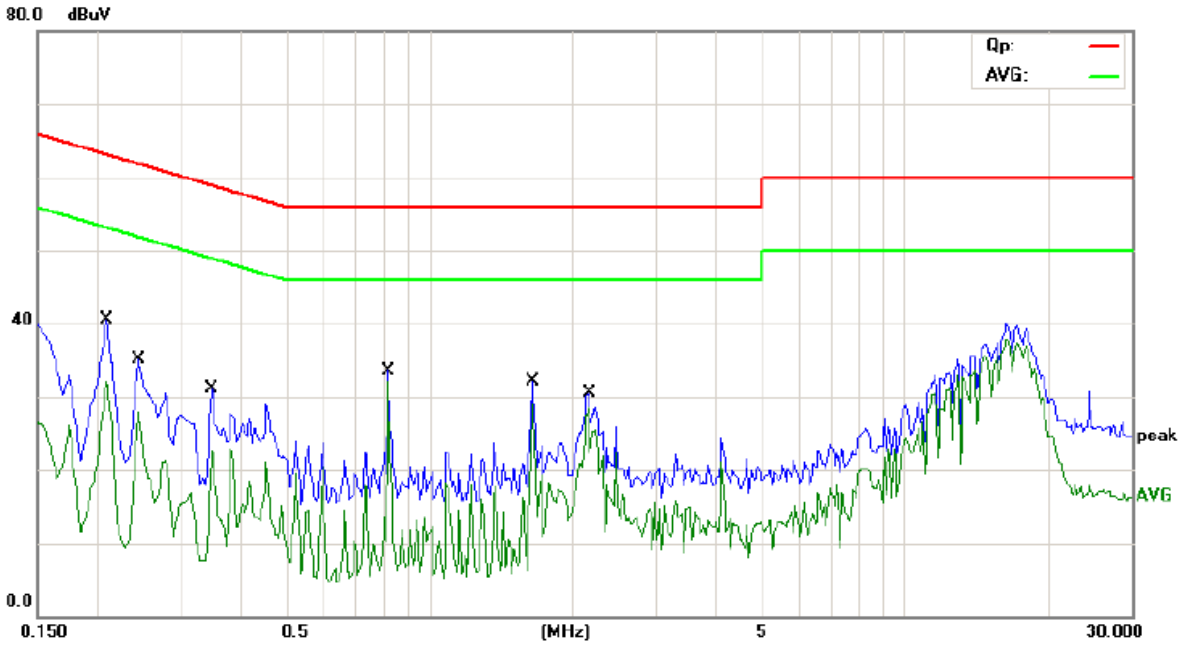
6.1.Photo of Conducted Emission Measurement

6.2.Photo of Radiation Emission Measurement





APPENDIX I



Site site #1 Phase: L1 Temperature: 22

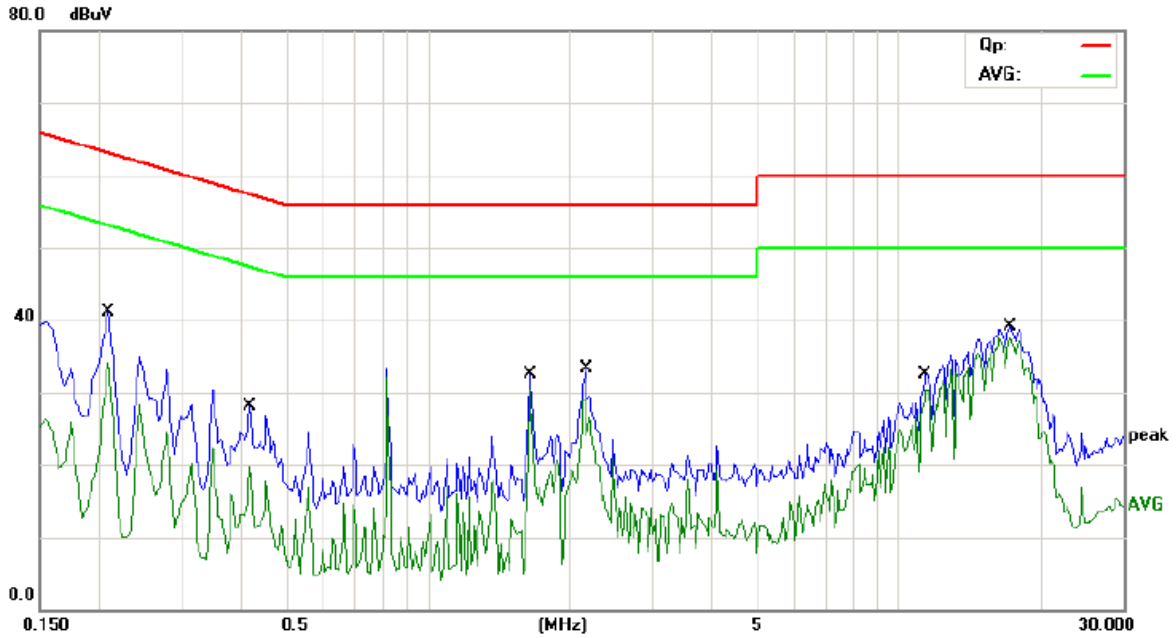
Limit: (CE)FCC PART 15 class B_QP Power: Humidity: 50 %

Mode: connect to pc

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2100	40.48	0.00	40.48	63.21	-22.73	QP	
2		0.2100	32.07	0.00	32.07	53.21	-21.14	AVG	
3		0.2450	35.03	0.00	35.03	61.92	-26.89	QP	
4		0.2450	27.91	0.00	27.91	51.92	-24.01	AVG	
5		0.3500	31.18	0.00	31.18	58.96	-27.78	QP	
6		0.3500	22.70	0.00	22.70	48.96	-26.26	AVG	
7		0.8250	33.60	0.00	33.60	56.00	-22.40	QP	
8	*	0.8250	32.09	0.00	32.09	46.00	-13.91	AVG	
9		1.6500	32.01	0.00	32.01	56.00	-23.99	QP	
10		1.6500	29.18	0.00	29.18	46.00	-16.82	AVG	
11		2.1700	30.48	0.00	30.48	56.00	-25.52	QP	
12		2.1700	28.57	0.00	28.57	46.00	-17.43	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Sea



Site site #1 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: Humidity: 50 %

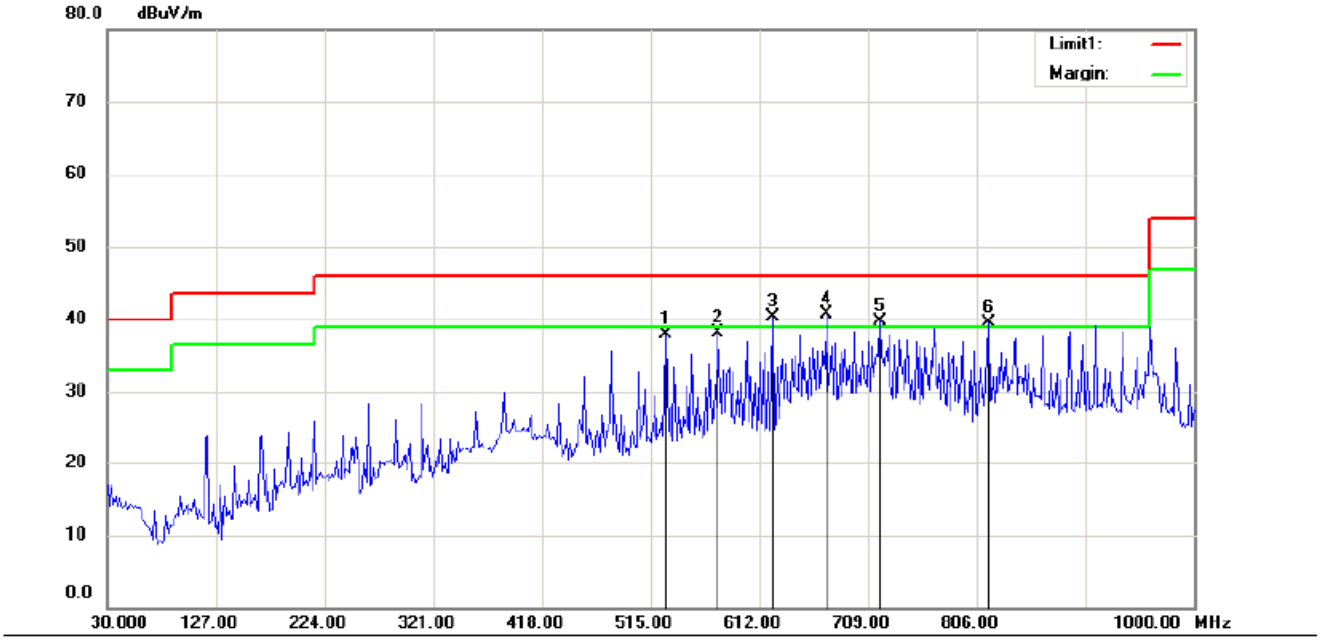
Mode: connect to pc

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2100	41.10	0.00	41.10	63.21	-22.11	QP	
2		0.2100	34.12	0.00	34.12	53.21	-19.09	AVG	
3		0.4200	28.17	0.00	28.17	57.45	-29.28	QP	
4		0.4200	19.79	0.00	19.79	47.45	-27.66	AVG	
5		1.6500	32.51	0.00	32.51	56.00	-23.49	QP	
6		1.6500	30.27	0.00	30.27	46.00	-15.73	AVG	
7		2.1700	33.40	0.00	33.40	56.00	-22.60	QP	
8		2.1700	29.40	0.00	29.40	46.00	-16.60	AVG	
9		11.4250	32.47	0.00	32.47	60.00	-27.53	QP	
10		11.4250	30.27	0.00	30.27	50.00	-19.73	AVG	
11		17.2250	39.14	0.00	39.14	60.00	-20.86	QP	
12	*	17.2250	37.53	0.00	37.53	50.00	-12.47	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: Sea

APPENDIX II



Site site #1 Polarization: *Vertical* Temperature: 26 C

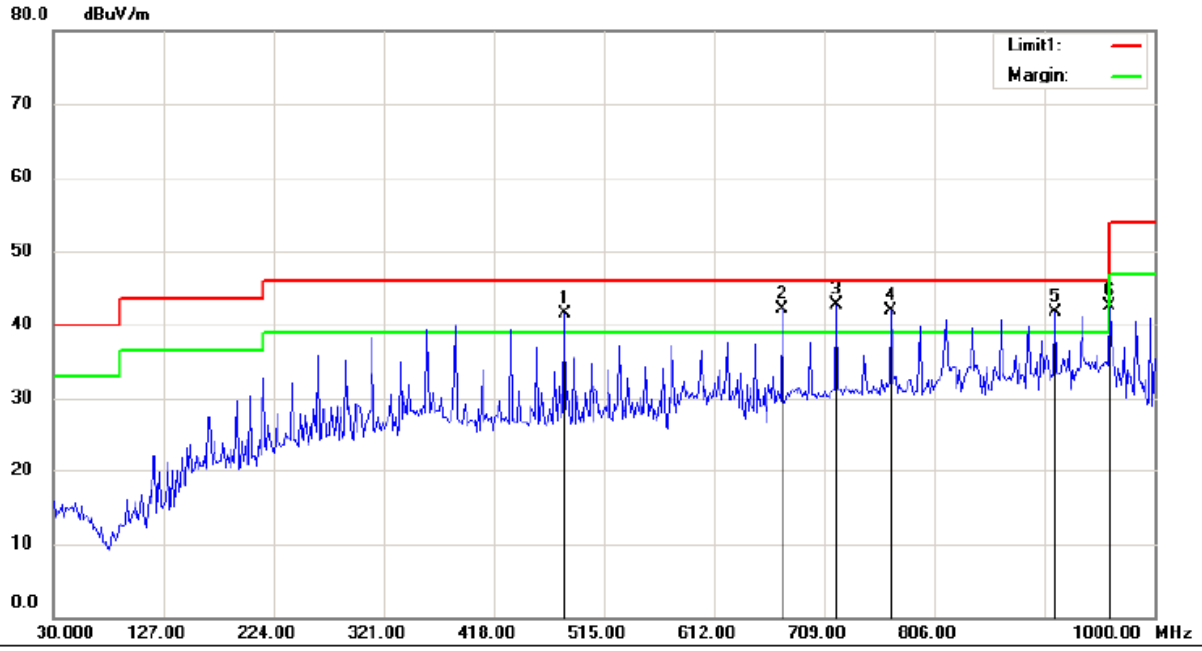
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Recording

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		528.9903	18.38	19.56	37.94	46.00	-8.06	QP			
2		575.6250	18.32	19.83	38.15	46.00	-7.85	QP			
3	!	623.8141	18.98	21.34	40.32	46.00	-5.68	QP			
4	*	672.0032	17.71	23.02	40.73	46.00	-5.27	QP			
5	!	720.1923	16.25	23.51	39.76	46.00	-6.24	QP			
6	!	816.5705	16.85	22.63	39.48	46.00	-6.52	QP			

*:Maximum data x:Over limit !:over margin Operator: WOLF



Site site #1 Polarization: *Horizontal* Temperature: 26 C

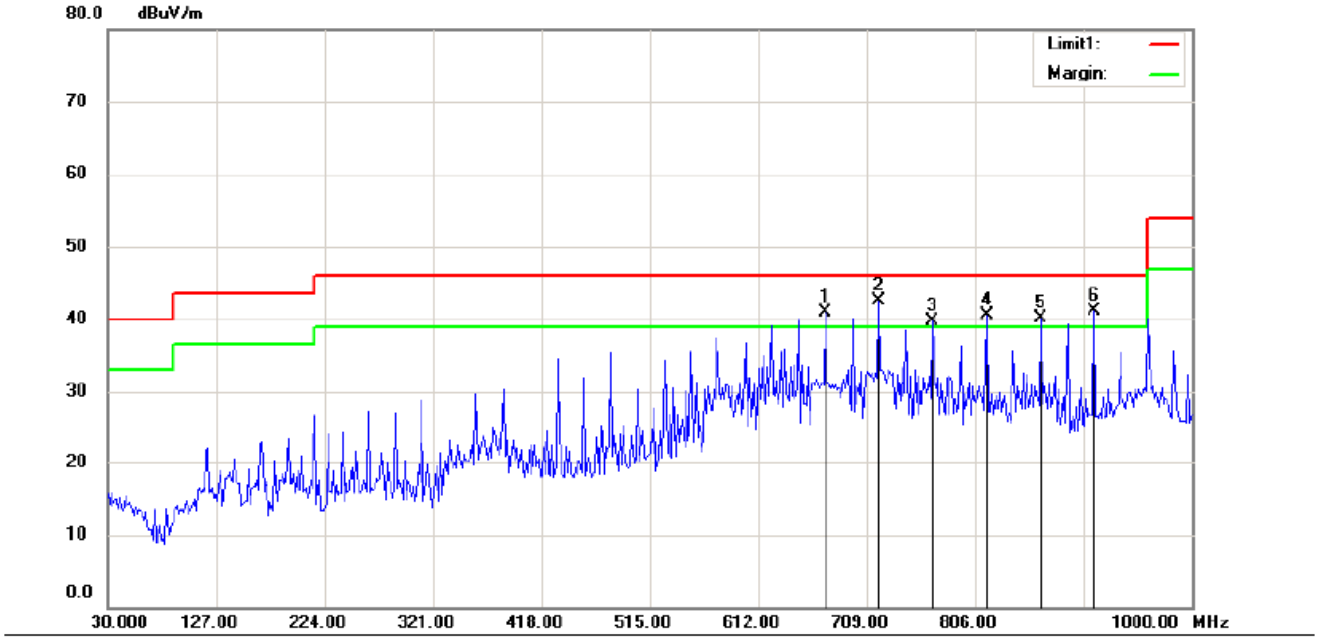
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Recording

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	480.8012	23.05	18.45	41.50	46.00	-4.50	QP			
2	!	672.0032	20.17	21.92	42.09	46.00	-3.91	QP			
3	*	720.1923	19.76	22.88	42.64	46.00	-3.36	QP			
4	!	768.3814	18.94	23.05	41.99	46.00	-4.01	QP			
5	!	912.9487	17.74	23.96	41.70	46.00	-4.30	QP			
6		961.1378	17.87	24.64	42.51	53.90	-11.39	QP			

*:Maximum data x:Over limit !:over margin Operator: WOLF



Site site #1 Polarization: *Vertical* Temperature: 26 C

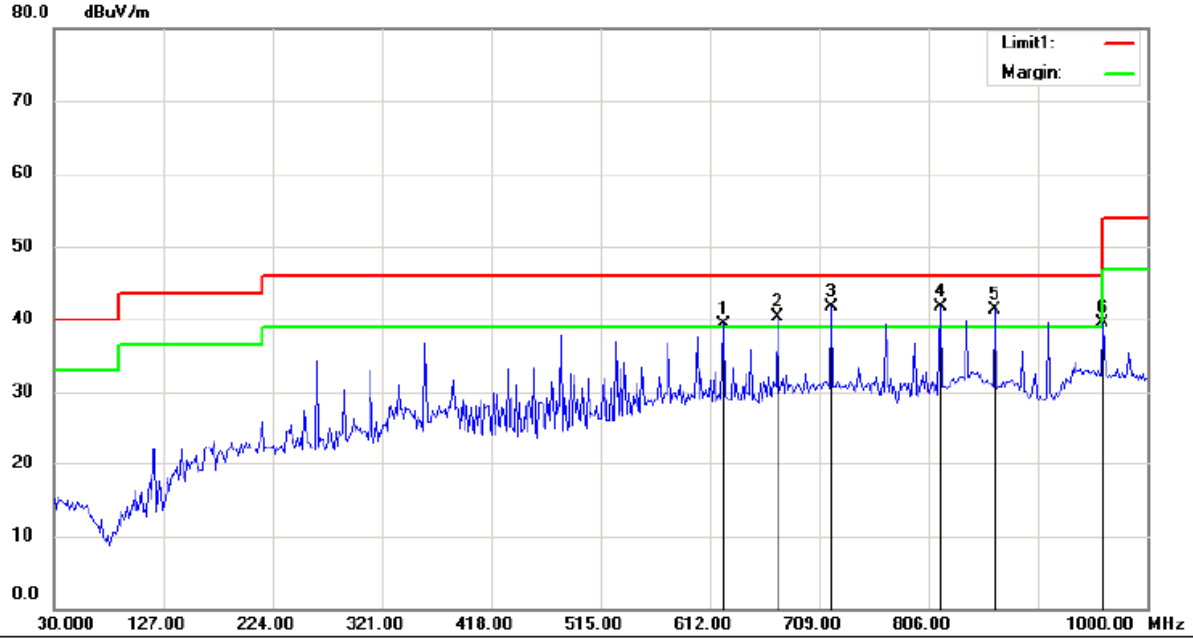
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	672.0031	17.91	23.02	40.93	46.00	-5.07	QP			
2	*	720.1923	18.90	23.51	42.41	46.00	-3.59	QP			
3	!	768.3812	17.49	22.27	39.76	46.00	-6.24	QP			
4	!	816.5705	17.81	22.63	40.44	46.00	-5.56	QP			
5	!	864.7596	17.06	23.13	40.19	46.00	-5.81	QP			
6	!	912.9487	17.12	24.04	41.16	46.00	-4.84	QP			

*:Maximum data x:Over limit !:over margin Operator: WOLF



Site site #1 Polarization: *Horizontal* Temperature: 26 C

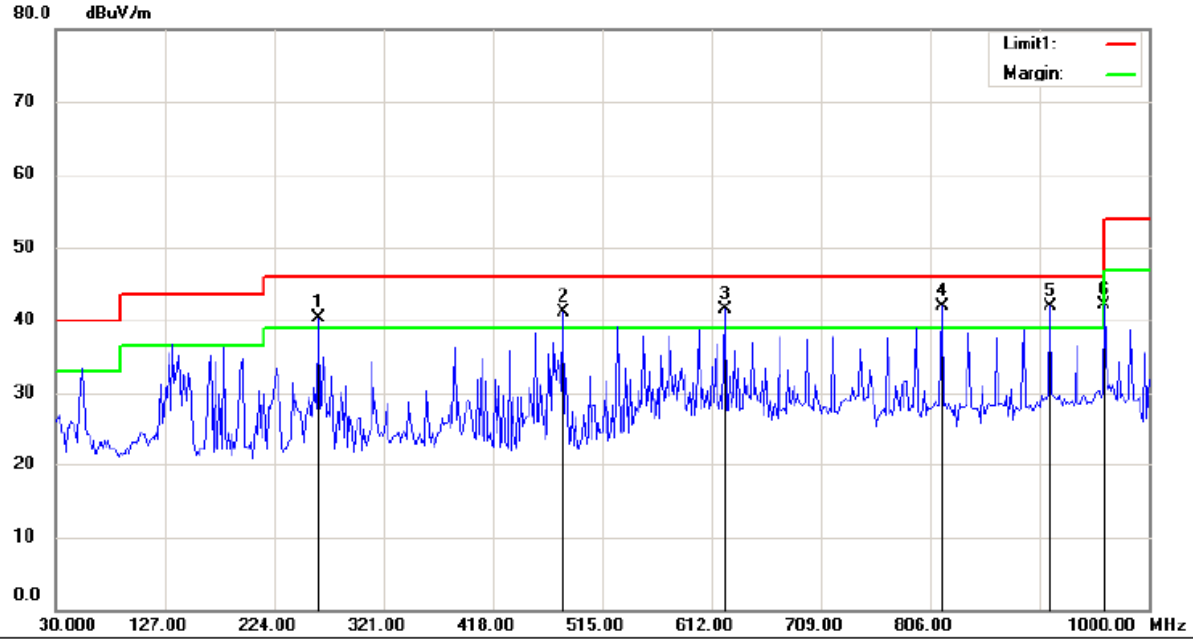
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Playing

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	623.8141	18.97	20.40	39.37	46.00	-6.63	QP			
2	!	672.0032	18.38	21.92	40.30	46.00	-5.70	QP			
3	*	720.1923	18.90	22.88	41.78	46.00	-4.22	QP			
4	!	816.5705	18.31	23.41	41.72	46.00	-4.28	QP			
5	!	864.7596	17.16	24.12	41.28	46.00	-4.72	QP			
6		961.1378	14.95	24.64	39.59	53.90	-14.31	QP			

*:Maximum data x:Over limit !:over margin Operator: WOLF



Site site #1 Polarization: *Vertical* Temperature: 26 C

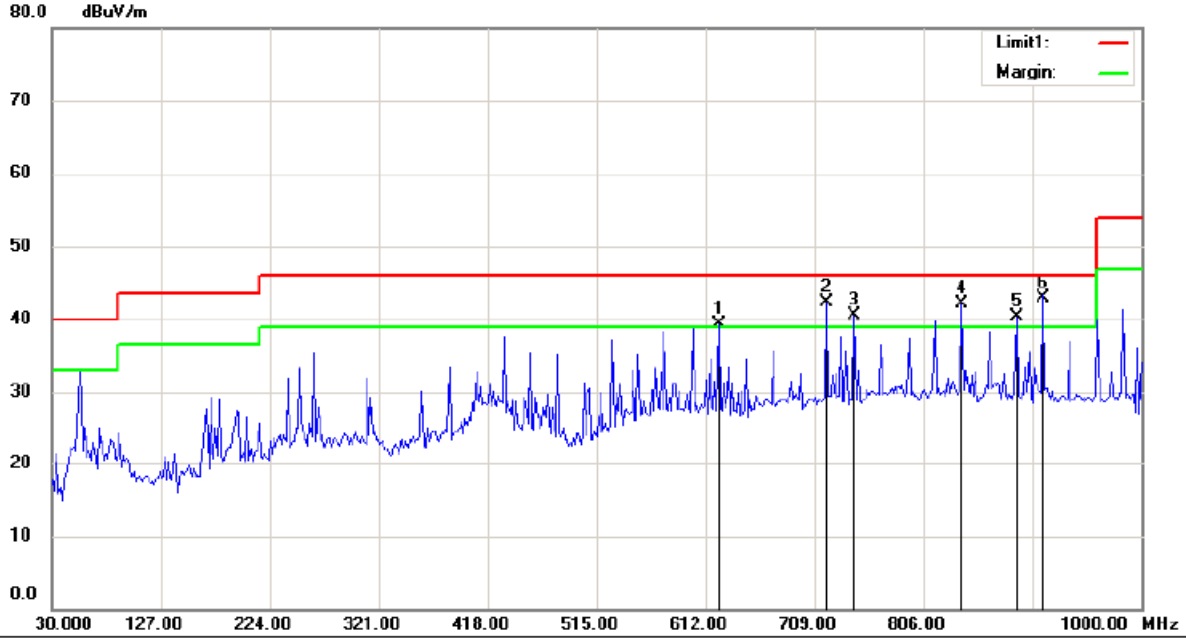
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Connect to pc

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	263.1730	26.13	14.10	40.23	46.00	-5.77	QP			
2	!	480.8012	22.71	18.45	41.16	46.00	-4.84	QP			
3	!	623.8141	21.19	20.40	41.59	46.00	-4.41	QP			
4	!	816.5705	18.51	23.41	41.92	46.00	-4.08	QP			
5	*	912.9487	17.99	23.96	41.95	46.00	-4.05	QP			
6		961.1378	17.46	24.64	42.10	53.90	-11.80	QP			

*:Maximum data x:Over limit !:over margin Operator: RJB



Site site #1 Polarization: *Horizontal* Temperature: 26 C

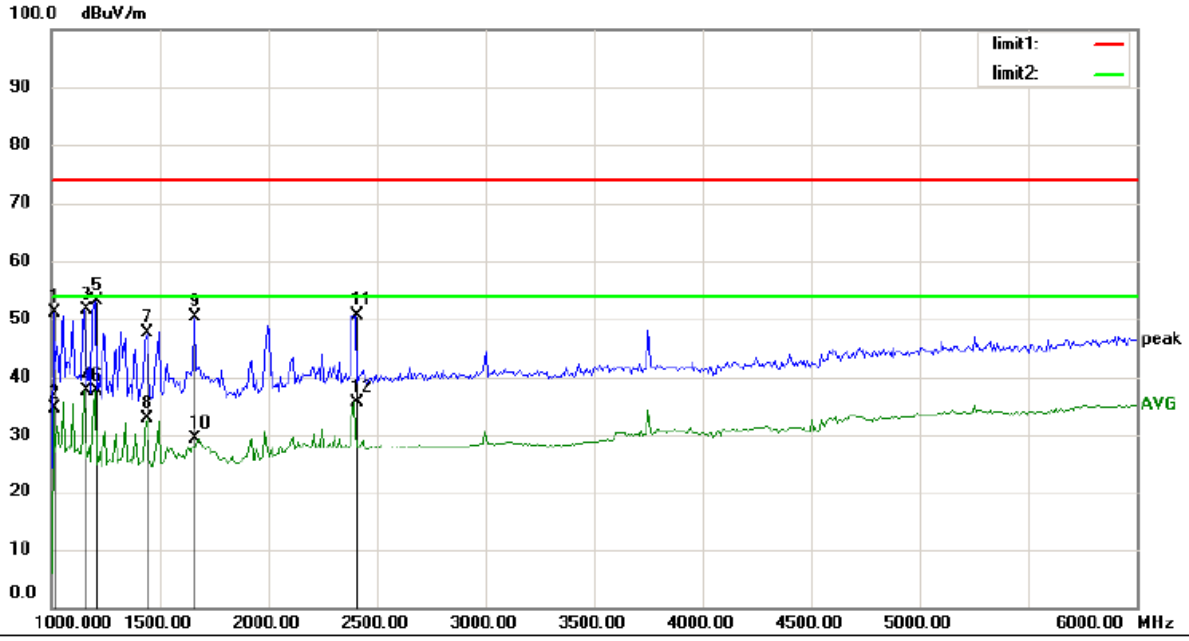
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Connect to pc

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	!	623.8141	18.95	20.40	39.35	46.00	-6.65	QP			
2	!	720.1923	19.42	22.88	42.30	46.00	-3.70	QP			
3	!	745.0641	17.56	22.97	40.53	46.00	-5.47	QP			
4	!	839.8878	18.42	23.77	42.19	46.00	-3.81	QP			
5	!	889.6314	16.41	23.90	40.31	46.00	-5.69	QP			
6	*	912.9487	18.90	23.96	42.86	46.00	-3.14	QP			

*:Maximum data x:Over limit !:over margin Operator: RJB



Site site #1 Polarization: *Vertical* Temperature: 26

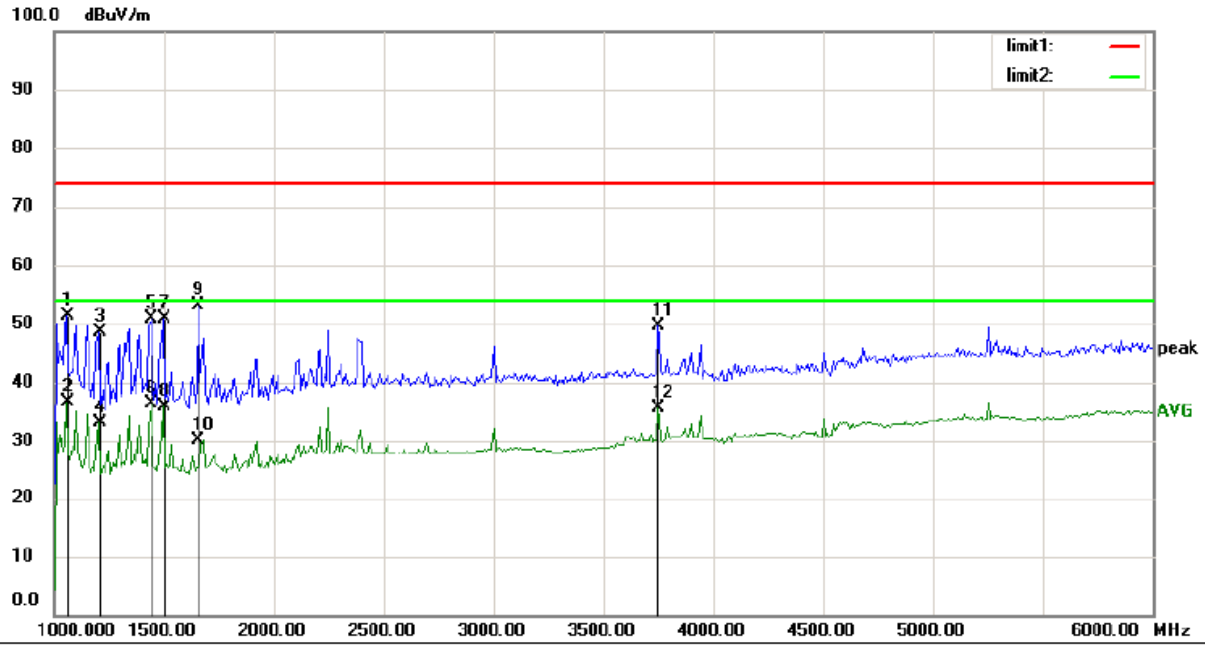
Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Connect to pc

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1008.013	64.78	-13.60	51.18	73.90	-22.72	peak			
2		1008.013	48.34	-13.60	34.74	53.90	-19.16	AVG			
3		1152.244	64.94	-13.23	51.71	73.90	-22.19	peak			
4		1152.244	50.76	-13.23	37.53	53.90	-16.37	AVG			
5		1200.321	66.19	-13.02	53.17	73.90	-20.73	peak			
6	*	1200.321	50.59	-13.02	37.57	53.90	-16.33	AVG			
7		1440.705	59.76	-12.18	47.58	73.90	-26.32	peak			
8		1440.705	44.96	-12.18	32.78	53.90	-21.12	AVG			
9		1665.064	62.68	-12.28	50.40	73.90	-23.50	peak			
10		1665.064	41.58	-12.28	29.30	53.90	-24.60	AVG			
11		2402.244	59.39	-8.67	50.72	73.90	-23.18	peak			
12		2402.244	44.41	-8.67	35.74	53.90	-18.16	AVG			

*:Maximum data x:Over limit !:over margin Operator: RJB



Site site #1 Polarization: *Horizontal* Temperature: 26

Limit: (RE)FCC PART 15 CLASS B Power: DC 4.5V Humidity: 60 %

Mode:Connect to pc

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		1056.090	64.95	-13.52	51.43	73.90	-22.47	peak			
2	*	1056.090	50.04	-13.52	36.52	53.90	-17.38	AVG			
3		1200.321	61.53	-13.02	48.51	73.90	-25.39	peak			
4		1200.321	46.14	-13.02	33.12	53.90	-20.78	AVG			
5		1440.705	63.13	-12.18	50.95	73.90	-22.95	peak			
6		1440.705	48.44	-12.18	36.26	53.90	-17.64	AVG			
7		1496.795	63.09	-12.27	50.82	73.90	-23.08	peak			
8		1496.795	48.06	-12.27	35.79	53.90	-18.11	AVG			
9		1657.051	65.45	-12.28	53.17	73.90	-20.73	peak			
10		1657.051	42.43	-12.28	30.15	53.90	-23.75	AVG			
11		3748.397	56.38	-6.72	49.66	73.90	-24.24	peak			
12		3748.397	42.34	-6.72	35.62	53.90	-18.28	AVG			

*:Maximum data x:Over limit !:over margin Operator: RJB

APPENDIX III
(Photos of EUT)


EMTEK样品标识